

remaining medication should be an integral component of asthma medication. As indicated by the case described by Sekerel and Sackesen, this may be more of an issue with certain delivery devices.

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Gastro-oesophageal reflux and asthma

We would like to comment on the paper by Coughlan *et al* on the relationship between medical treatment for reflux oesophagitis and asthma control.¹ Gastro-oesophageal reflux (GOR) can cause dyspnoea in non-asthmatic patients with normal pulmonary function and bronchial reactivity that improves with antireflux therapy.^{2,3} Coughlan *et al* state that we included uncontrolled trials in our analysis.¹ This is incorrect.

We identified 12 studies—three uncontrolled, one with an untreated control, and eight controlled.⁴ We felt, however, that these studies were not amenable to meta-analysis since outcomes varied, different classes and doses of antireflux medications were used, treatment periods ranged from 1 week to 6 months, different diagnostic criteria for GOR and asthma were used, asthma severity differed, and studies were done in different populations. We excluded the open studies and the paper with the untreated control group.⁵ In table 3 studies were categorised according to Sackett's criteria.⁶ In the abstract, materials and methods, figure legends, results, and discussion we clearly stated that the results of the controlled trials were analysed and presented.⁴ In addition to these eight controlled trials, Coughlan included one with an untreated control and three controlled trials published since our review.⁷⁻⁹ The small number of patients with GOR symptoms and its mild nature may explain the apparent lack of benefit reported by Boeree *et al*.⁷ The study by Levin *et al* only included nine subjects.⁸ Kiljander *et al* reported a trend in asthma symptom improvement that may have been significant had the study been properly powered.⁹

The effects of antireflux surgery on asthma have also been reported. Most studies were uncontrolled, did not document GOR or asthma objectively, and did not measure objective outcomes.¹⁰ Both controlled studies reported that asthma symptoms, but not pulmonary function, improved, which is consistent with our hypothesis.¹¹⁻¹³ An improvement in asthma symptoms was the most consistent change in both the medical and surgical antireflux therapy trials and may be an important clue to the nature of the relationship between GOR and asthma.^{4,10} We would caution clinicians not to dismiss GOR as an irritant in poorly controlled asthmatics, especially those with reflux associated respiratory symptoms. We agree with Coughlan that further properly controlled and powered studies are required to assess the effects of antireflux therapy on asthmatics with GOR.

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AUTHOR'S REPLY We thank Drs Field and Sutherland for their comments on our systematic review. We are essentially in agreement that the current literature does not support a strong clinical recommendation for treating gastro-oesophageal reflux (GOR) in patients with asthma. We are also in agreement about the need for further research to clarify this potentially important trigger factor for people with asthma. As Dr Field points out, it is not only important to have adequately powered randomised trials to investigate the effects of treatment of GOR on asthma, it is also important to conduct primary research to understand the nature of respiratory symptoms which develop following GOR. This latter point is emphasised by the study showing symptom changes but not necessarily changes in lung function measures when reflux occurs in asthma.

Dr Field also comments on the process of the two reviews. A key difference is the systematic nature of our review. It is now well established that Cochrane systematic reviews are of a higher quality and are likely to be less biased than non-systematic reviews, particularly in the field of asthma.¹ We performed a Cochrane systematic review and updated it for publication in *Thorax*.

In conclusion, we agree with Dr Field about the potential importance of reflux in asthma, and also agree that clinical recommendations for treatment cannot be based on high level evidence at this stage until further research is done.

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- 1 Jadad AR, Moher M, Browman GP, *et al*. Systematic reviews and meta-analyses on treatment of asthma: critical evaluation. *BMJ* 2000;**320**:537–40.

BOOK REVIEW

Computed Tomography and Magnetic Resonance of the Thorax. D P Naidich, R W Webb, N L Muller, *et al*. (Pp 784; \$155.00). USA: Lippincott Williams & Wilkins, 1999. 0 7817 1660 8

This is a superb book. Anybody, like this reviewer, who has ever looked at a CT scan and felt confused or uncertain as to what the appearances show will find this book enlightening. As in previous editions (under the title of *Computer Tomography of the Thorax*), the authors explain the methods of scanning, the anatomy of the thorax, and then take the reader through a series of chapters organised around the structures contained in the thorax rather than a traditional respiratory medicine breakdown based on disease categories. In all respects the text has been significantly extended and improved on its previous editions, but the inclusion of magnetic resonance scans is a major development in this new edition. However, the major strength of the text is that its clinical orientation makes it superbly accessible to all with an interest in the diagnosis and interpretation of scans of the chest. This is a comprehensive, definitive, informative, and ultimately highly accessible overview of a complex subject and is strongly recommended.—JB

NOTICE

Basic and Clinical Allergy 2002

"Basic and Clinical Allergy 2002" will be held at the National Heart & Lung Institute, Faculty of Medicine, Imperial College, London on 18–22 March 2002. Main topics include: Basic cellular mechanisms and their application in allergic disease; Allergic rhinitis; Indoor allergens; Allergen specific immunotherapy and T cell tolerance; Asthma (aetiology and pathogenesis); Treatment of asthma. CPD/CME approval pending (2001 course maximum 23.5 credits). Further details from the Short Courses Office, Education Centre, Faculty of Medicine, Imperial College, National Heart & Lung Institute, Dovehouse Street, London SW3 6LY, UK. Telephone +44 20 7351 8172. Fax +44 20 7351 8246. Email: shortcourses.nhli@ic.ac.uk; www.med.ic.ac.uk/divisions/47a/mtgs.htm.